

Global Business Services

The Future of American Healthcare: Developing a Nationwide Healthcare Information Network

Dave "Casey" Webster
IBM NHIN Chief Architect

June 6, 2006

Agenda

- Background of National HIT Initiatives from ONC
- Nationwide Healthcare Information Network Overview
- NHIN Prototype Use Cases
- IBM NHIN Architecture Overview
- Discussion and Questions

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Health Information Technology Deployment

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Standards Harmonization Process

- HHS awarded a contract valued at \$3.3 million to the American National Standards Institute (ANSI) to convene the Health Information Technology Standards Panel (HITSP).
- The HITSP will develop, prototype, and evaluate a harmonization process for achieving a widely accepted and useful set of health IT standards that will support interoperability among health care software applications, particularly EHRs.

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Compliance Certification Process

- HHS awarded a contract valued at \$2.7 million to the Certification Commission for Health Information Technology (CCHIT) to develop criteria and evaluation processes for certifying EHRs and the infrastructure or network components through which they interoperate.
- CCHIT will submit recommendations for ambulatory EHR certification criteria and to develop an evaluation process for ambulatory health records
- Criteria include
 - The capabilities of EHRs to protect health information
 - Standards by which EHRs can share health information
 - Clinical features that improve patient outcomes.

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Privacy and Security Solutions

- HHS awarded a contract valued at \$11.5 million to RTI, a private, non-profit corporation, to lead the Health Information Security and Privacy Collaboration (HISPC), a collaboration that includes the National Governors Association (NGA), up to 40 state and territorial governments, and a multi-disciplinary team of experts.
- RTI will oversee the HISPC to assess and develop plans to address variations in organization-level business policies and state laws that affect privacy and security practices that may pose challenges to interoperable electronic health information exchange while maintaining privacy protections.

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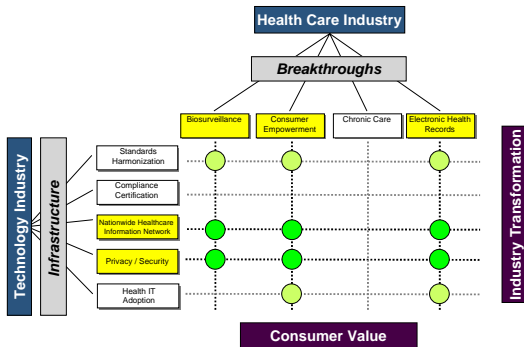
Health Information Technology Adoption Initiative

- HHS awarded a contract valued in excess of \$1 million to the George Washington University and Massachusetts General Hospital Harvard Institute for Health Policy to support the Health IT Adoption Initiative.
- The new initiative is aimed at better characterizing and measuring the state of EHR adoption and determining the effectiveness of policies to accelerate adoption of EHRs and interoperability.
- For more information visit: <http://www.hitadoption.org/>

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Nationwide Healthcare Information Network



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HHS NHIN Architecture Prototype: Key Facts

- Design and demonstrate a standards-based network prototype over the coming year
 - Prototype versus Functional Network
- Demonstration Goal
 - Develop and evaluate prototypes of an NHIN architecture that maximize use of existing resources to achieve interoperability among HC Applications – particularly EHRs
 - Live data, live systems
- Demonstrate the solution in 3 marketplaces / communities
 - 2 competing hospitals, 2 primary care facilities, at least 1 safety net provider / community
- Three “harmonized” use cases
- Oh, and have it up and running by Dec 29, 2006

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HHS NHIN Architecture Prototype : Vendor Awardees

- Four Major Awarded Consortia and Respective Marketplaces
 - IBM
 - Accenture
 - CSC
 - Northrop Grumman
- Approach will be cooperative and collaborative
 - Between Four Awarded Consortia
 - With Other HHS Partners
 - Health Information Technology Standards Panel (by ANSI)
 - Certification Commission for Health Information Technology
 - Health Information Security and Privacy Collaboration (established by RTI and National Governor's Assoc)
 - American Health Information Community (AHIC)

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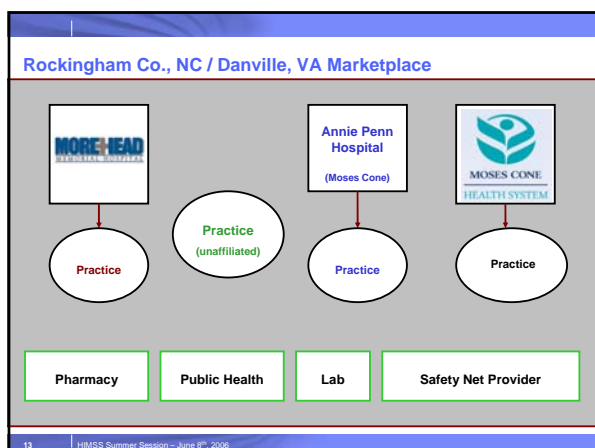
Marketplaces

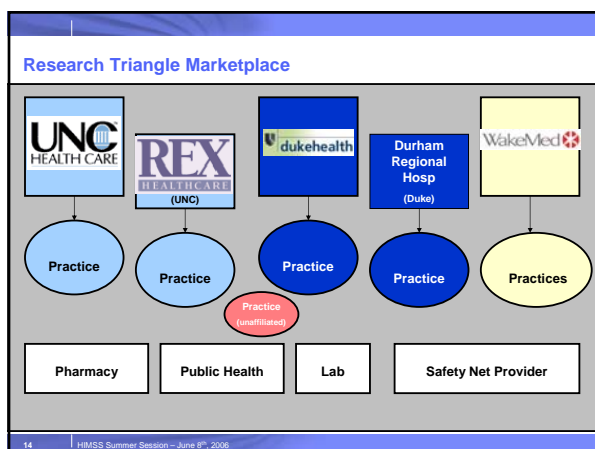
- Fishkill, NY (THINC)
 - Taconic Healthcare Information Network Communication
 - Hudson Valley: evolving RHIO w/ shared data at HealthVision hub
 - 2,300 physicians supporting 700,000 patients
- Research Triangle, NC (NCHICA)
 - Competitive, high-tech urban environment
 - Hospitals: Duke, WakeMed, Rex (UNC Health)
 - Practices, Public Health, Pharmacies
- Rockingham County, NC and Danville, VA (NCHICA)
 - Rural environment with NC and VA patients
 - Hospitals: Morehead Memorial, Annie Penn (Moses Cone Health System)
 - Practices, Public Health, Pharmacies



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The NHIN Project will run through the end of the year and consists of 4 phases

PHASE	DURATION	START	FINISH
NHIN Architecture Prototype Project	185 days	4/17/06	12/29/06
Requirements & Design Phase	40 days	4/17/06	6/19/06
Implementation Phase	130 days	5/22/06	12/18/06
Prototype Demonstration Phase	9 days	12/19/06	12/29/06
Fostering NHIN Adoption & Implementation & Governance Model	140 days	5/15/06	11/24/06

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ONC Use Cases to Demonstrate Interoperability

Use Case Broad Areas:

- Biosurveillance
 - To make recommendations to the Community to implement the informational tools and business operation to support **real-time nationwide public health event monitoring** and rapid response management across public health and care delivery communities and other authorized government agencies.
- Consumer empowerment
 - To make recommendations to the Community to gain wide spread adoption of a **personal health record** that is easy-to-use, portable, longitudinal, affordable, and consumer-centered.
- Electronic Health Record
 - To make recommendations to the Community on ways to achieve widespread adoption of certified **EHRs**, minimizing gaps in adoption among providers.

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Harmonized Use Case #1 – Biosurveillance

Specific Use Case:

- Capture essential ambulatory care and ER visit, utilization, and lab result data from electronically enabled health care delivery and public health systems
- Aggregate into a standardized and anonymized (but re-identifiable) format
- Transmit to authorized public health agencies with less than one day lag time.

Functionality:

- Clinical Sources (ambulatory care, emergency departments, and in-house labs)
 - Filter data based on algorithms provided by authorized PH agencies
 - Capture all relevant data that trigger a reportable event
 - Normalize, de-identify, and attach randomized identifier
 - Transmit securely, observing local, state, and federal PH alerting protocols
 - Support re-identification for authorized public health investigations
- Resource Utilization Data

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Harmonized Use Case #2 – Consumer Empowerment

Specific Use Case:

- Deploy a pre-populated, consumer-directed and secure electronic registration summary
- Deploy a pre-populated medication history linked to the registration summary.

Functionality:

- The registration summary will be restricted to the information consumers generally need to provide when visiting a physician such as:
 - Demographic information sufficient to help identify the consumer
 - Financial information sufficient for eligibility checking and claims processing
 - Basic clinical information including allergies
 - Enabling consumers to establish permissions and access rights for viewing their data
- The medication history presumes sufficient information about consumers' current and past medications to enable the following activities:
 - Create, update and view medication history
 - Physician's review of medication history with consumer
 - Differentiate current medications from past medications

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Harmonized Use Case #3 - Electronic Health Record

Specific Use Case:

- Deploy standardized, widely available, secure solutions,
- for accessing laboratory results and interpretations,
- in a patient-centric manner,
- for clinical care by authorized parties.

Functionality:

- Transmission of complete, preliminary, final and updated lab results* to the EHR system (local or remote) of the ordering clinician
- Transmission (or notification) of complete, preliminary, final and updated lab results to the EHR system or other clinical data system of designated providers of care
- Retrieval of historical lab results by providers of care
- Clinician access to test results respects:
 - privacy concerns
 - sensitivity designations or other attributes
 - access rules determined by policy

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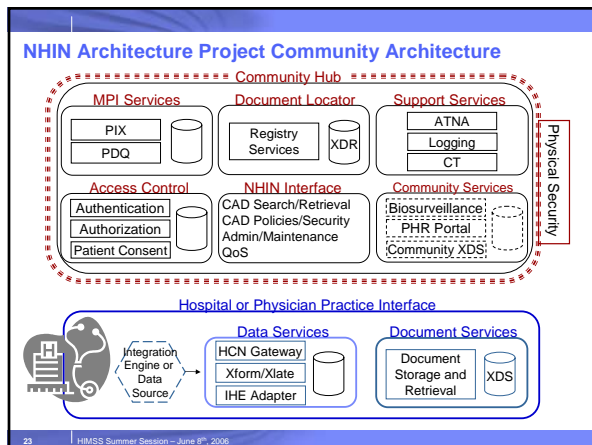
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NHIN Architecture Project Guiding Principles

- Community-Centric
 - Document repositories normalize and store clinical data within a community
 - Hosted by individual hospitals/practices and/or shared within the community
 - Community hub provides patient lookup/cross-referencing, document locator, security and support services
 - The community hub is the gateway to other communities
- Drive and conform to standards
 - Instantiation of IHE interoperability framework using Java/J2EE
 - Clinical events stored as HL7 CDA(r2)-compliant documents
 - Cross-community search & retrieval
- Provide security & privacy w/o sacrificing usability or research value
 - Anonymous/pseudonymous data that can be re-identified as needed/permitted
 - Supports other data aggregates (registries, biosurveillance, outcomes analysis, quality of care)
- Practical
 - Scalable and cost-effective at every level of practice
 - Total open-source implementation is viable
 - Point-of-care performance is critical to adoption



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